



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,333	01/09/2002	Mitsuru Tamura	Q67986	3288
7590	03/03/2005		EXAMINER	
SUGHRUE MION, PLLC 2100 Pennsylvania Avenue, NW Washington, DC 20037-3213			BHAT, NINA NMN	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 03/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/040,333	TAMURA ET AL.
	Examiner N. Bhat	Art Unit 1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 14 October 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 4-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 4-9 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10-14-2003.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/61485.

WO 99/6148 teach a process for early detection of reactor fouling in a fluidized bed reactor which includes detecting agglomerates in the mixed phase fluidized bed using detecting means in which the detecting means are disposed on the upper part of a fluidization grid which are capable of detecting polymer agglomerates falling on and/or hitting the switches.[Note Page 3, lines 18-29] Specifically, the devices comprises switches which protrude the grid; when a polymer agglomerate hits the switch the switch give an indicative signal of the presence of the agglomerates on the grid. The device or switch can be a mechanical, electrical, electromechanically or pneumatic type, the devices are chosen so that they are not influenced by the polymerization conditions

such as temperature and pressure. The preferred type of switch employed in WO 99/6148 are electromechanical switches, specifically Telemecanique XCK-P switches. The fluidization grid is fitted with the switches capable of detecting the polymer agglomerates hitting the devices. The amount and size of the devices depend on the size of the grid, the size of the reactor and characteristics of the polymer agglomerates to be detected. For a disc shaped fluidization grid having a diameter of 4-6 meters there are at least 4-10 devices employed on the grid for detection.[Note Page 4, lines 5-30]

However, WO 99/6148 does not teach that the detecting means is a detecting rod disposed in the mixed phase container wherein the rod is disposed at an insertion angle in the range from 20-70 degrees in relation to the flow of gas and powders.

Although, WO 99/6148 does not teach using a detecting probe at the insertion angle disclosed by applicant, it is maintained that using the detecting rod as claimed by applicant would have been obvious in view of the teachings of WO 99/6148 because, WO 99/6148 specifically recognizes and teaches how one of ordinary skill in the art would detect agglomerates in mixed phase container or fluidized bed reactor and further, the detection means are located in the vicinity of the grid or distributor plate such as has been claimed by applicant. A plurality of electromechanical switches are disposed on the grid of the fluidized bed reactor as taught by WO 99/6148, although the detecting means are switches of a specific type, the detecting means capable of functioning equivalently to applicant's probe and the fact that the probe may be inserted in the reactor at a specific angle in relation to the flow of gas and powders, it is maintained that the switches disposed on the fluidized grid are situated so that the switch can not

only detect agglomerates falling on the grid but are also not influenced by the fluidization and polymerization reaction taking place in the fluidized bed reactor and therefore, the insertion angle may only be significant for the type of detecting means employed in the reactor such as a probe, the switches used by WO 99/6148 would function equivalently to applicant apparatus for detecting agglomerates in a mixed phase reactor or polymerization reactor thus rendering the invention as a whole obvious to one having ordinary skill in the art.

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 4-9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,521,723. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the instant application and the '723 Patent claim an apparatus for detecting agglomerates in a mixed phase container in which a mixed phase of gas and powders such as products of the olefin polymer and/or catalyst is formed, the apparatus comprising a detecting rod disposed with in the reactor. Although the

detecting means insertion angle is claimed in the instant application, the detecting rod within the container or reactor of the'723 patent is broad enough to encompass the angle of insertion as claimed in the instant invention. Similarly, the magnet and magnetic flux detecting means connected on the agglomerate-detecting probe is not precluded in the instant invention and would have been an obvious expedient in using a probe or detecting rod disposed with a mixed phase container or fluidized bed reactor.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Haardt et al. teach a process for early detection of reactor fouling in gas phase polymerization. Tamura et al. is the parent application for the instant application. Takimiya et al. is a method and apparatus for detecting agglomerates. Takimiya et al. does not qualify as prior art as it has the same effective filing date as the instant application.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 571-272-1397. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Calderola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



N. Bhat  
Primary Examiner  
Art Unit 1764